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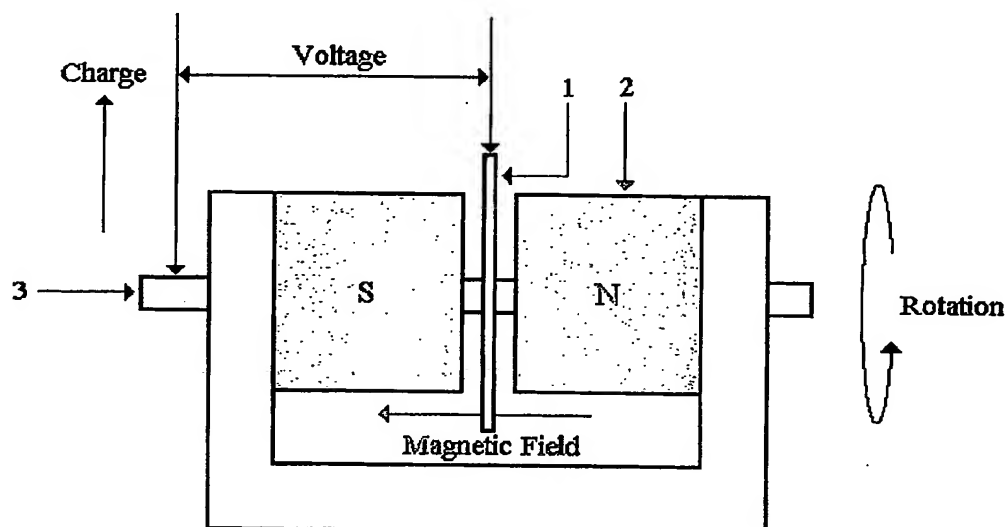
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(54) Title: **INTEGRATED RENEWABLE ENERGY SYSTEM**



(57) Abstract: A system and method are disclosed comprising coupling a compression ignition engine (17) to an AC electrical generator (18) and/or a DC homopolar generator (19), wherein the homopolar generator (19) produces an electric current which is used to electrolyse water into hydrogen and oxygen. The hydrogen from the water electrolysis process may be used as a renewable fuel, either in the form of a gaseous fuel or a reactant in a fuel cell. The oxygen from the water electrolysis unit (23) may be used to produce an oxygen enriched combustion atmosphere in the engine (17). The oxygen may optionally be used as a reactant, along with the hydrogen, in a fuel cell.



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